

CLAIMS

What is claimed is:

1. A disc cartridge comprising:
an upper case and a lower case which form an internal space therebetween to accommodate a disc wherein the lower case comprises:
a pair of elastic protrusions that are formed at sidewalls of the lower case and are elastically biased toward the internal space so that ends of the pair of elastic protrusions support the disc,
wherein surfaces are formed at the ends of the pair of elastic protrusions to slope toward the internal space so that the disc is located in an upper portion of the internal space and supported by the pair of elastic protrusions and the disc descends on the surfaces when the pair of elastic protrusions are opened and the disc is then located in a lower portion of the internal space.
2. The disc cartridge of claim 1, wherein the pair of elastic protrusions extend from the sidewalls of the lower case.
3. The disc cartridge of claim 1, further comprising openings formed in the upper and lower cases to allow an optical pickup to access the disc through the openings.
4. A disc drive apparatus loading a disc cartridge having an upper case and a lower case, wherein the lower case comprising at least a pair of elastic protrusions extending from sidewalls of the lower case to support a disc on sloped surfaces formed at ends of the elastic protrusions, the disc drive apparatus comprising:
levers which contact with the ends of the elastic protrusions to open the elastic protrusions when the disc cartridge enters the disc drive apparatus, to allow the disc to descend on the sloped surfaces in an internal space between the upper and lower cases.
5. The disc drive apparatus of claim 4, wherein when an external force is not applied to the disc, the disc is located in an upper portion of the internal space and is supported by the elastic protrusions.

6. The disc drive apparatus of claim 4, wherein when an external force is applied to the disc, the elastic protrusions are opened outwardly and the disc descends on the sloped surfaces and is located in a lower portion of the internal space.

7. The disc drive apparatus of claim 4, further comprising dents formed on the sidewalls of the lower case, and latches installed on sidewalls of the disc drive apparatus and latched into the dents of the disc cartridge when the disc cartridge loads into the disc drive apparatus.

8. The disc drive apparatus of claim 7, further comprising a torsion spring which elastically biases the latches in a direction along which the disc cartridge unloads from the disc drive apparatus.

9. The disc drive apparatus of claim 7, further comprising a loading member which rotates thereby causing the latches to be locked and unlocked.

10. The disc drive apparatus of claim 9, wherein the latches move with the disc cartridge when the disc cartridge loads into the disc drive apparatus and are locked by the loading member to fix the disc cartridge at a loading position.

11. The disc drive apparatus of claim 9, wherein the latches are unlocked by the loading member when the disc cartridge moves to a predetermined position in a loading direction and the disc cartridge springs out of the disc drive due to an elastic restoration of a torsion spring.

12. A method of loading a disc cartridge into a disc drive apparatus, the method comprising:

positioning a disc into a disc cartridge to be loaded into the disc drive, wherein the disc is located in an upper portion of the disc cartridge and supported by surfaces fixed on a pair of elastic protrusions of a lower case of the disc cartridge;

loading the disc cartridge into the disc drive;

contacting the elastic protrusions with levers on the disc drive apparatus and outwardly opening the elastic protrusions;

descending the disc on the surfaces and then positioning the disc in a lower portion of the disc cartridge; and

contacting the disc with a motor hub of the disc drive apparatus when the disc cartridge is loaded into the disc drive apparatus.